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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/689,362	Applicant(s) TODA, YASUSHI	
	Examiner JIANYE WU	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/12/08.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 3/12/08 have been fully considered but they are not persuasive.

2. Applicant acknowledges that this application is an implementation of 3GPP, and argues that implementation of a protocol could be patentable such as US Patent No. 7337217 is the implementation of the DHCP protocol (page 2-3).

However, in light of the claim language, prior art rejection has been maintained as shown below.

3. For independent claims 1-3, Applicant argues "3GPP does not disclose or suggest determining if a parameter is calculated; instead, a chart containing various parameters is taught" (page 3).

In response, the parameter is TFCI as shown in the Office Action, which is obtained by calculation. For, example, it is explicitly disclosed by 3GPP331 in Section 8.6.5.2, 3rd paragraph, page 196, as "calculate the possible TFCI value". Therefore, Applicant's argument is not persuasive and Examiner maintains the position of rejection.

4. For independent claims 22-24 and 28-30, Applicant argues "3GPP and Forrester does not teach or suggest high utilization frequency parameters and does not teach or suggest each limitation of independent claims 22-24 and 28-30" (page 4).

In response, as to "high utilization frequency parameters", it can not be found in any of claims 22-24 and 28-30. As to "does not teach or suggest each limitation of

independent claims 22-24 and 28-30" Applicant fails to point out specifically which limitation is not addressed. Therefore, Examiner maintains the position of rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claims 1-12, 18-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over "UMTS RRC Protocol specification", V4.0.0.0, 2003-03 (hereinafter 3GPP331) in view of Tim Forrester (US 2002/0173284, hereinafter Forrester).

For **claim 1-3**, 3GPP331 discloses a data communication system constructed as a transmitting side data communication terminal device (UE, Fig. 2, Page 30) comprising a coding means (DCFE in Fig. 2, Page 30; or 4th item of Section 4.2, Page 29) for generating, by receiving supplied transmitted data and transmission parameter, coded/multiplexed transmitted data corresponding to the transmitted data and transmission parameter and a transmitting process parameter used for a transmitting process on the coded/multiplexed transmitted data, wherein;

the coding means, includes:

the transmitting side data communication terminal device having a coding process unit (3rd item of Section 5.1, Page 32, a part of RRC functions for establishing a connection) for obtaining the coded/multiplexed transmitted data corresponding to the transmitted data by using a supplied coding process parameter (TFCI, Section 10.3.5.12, Page 370), a parameter calculation check unit for checking (TFCI range method, Section 10.3.5.14, Page 371, means for handling TFCI range method), according to transport format data contained in the transmission parameter, whether the process parameter concerning a pertinent transport format combination has been calculated, a coding parameter calculation unit (TFCI, Section 10.3.5.12, Page 370, implied by device for calculating TFCI parameter) for calculating the process parameter including the coding process parameter and the transmitting process parameter according to the transmission parameter; and

a receiving side data communication terminal unit (UE, Figure 2 of Page 30) including a decoding means (“UE shall perform decoding ...”, Line 4 of Section 8.1.1.1.4, Page 42) for receiving non-decoded data supplied from a receiving means (3rd item of Section 5.1, Page 32, a part of RRC functions for establishing a connection), which executed process on the received data by using a receiving process parameter (TFCS Explicit Configuration, Section 10.3.5.13, Page 371), and generating decoded received data by using a supplied reception parameter, the decoding means having a decoding process unit (Section 10.3.5.12, Page 370, means for calculating TFCI) for obtaining decoded received data by decoding non-decoded data supplied from the

receiving means, which executes a process using the receiving process parameter, a parameter calculation check unit for checking (Figure 21 or Counter check of Section 8.1.15, Page 85), at the time of the reception and by using transport format combination indicator (TFCI Field 2 Information, Section 10.3.5.12, Page 370) data obtained from the decoding process unit, whether the process parameters in the pertinent transport format combination have been calculated, a decoding parameter calculation unit (TFCI Field 2 Information, Section 10.3.5.12, Page 370) for calculating the process parameter including the decoding process parameter and the receiving process parameter, (3rd item of Section 5.1, Page 32, all of the above are part of Establishment, maintenance and release of an RRC connection as described in the item, considering CDMA technology is well known in the art)

3GPP331 does not explicitly teach a process parameter buffer for preserving a plurality of process parameters, and a buffer control means for reading out and storing a pertinent process parameter with respect to the process parameter buffer according to a buffer control signal from the parameter calculation check unit, while updating the utilization frequency data

Forrester discloses using memory (memory 44, of FIG. 1) to store process parameters and a means for controlling the memory (computation engine 46 of FIG. 1) for reading out and storing the contents of the memory. It is a common knowledge in the art that the buffer is a commonly used format of memory, especially for the memory used with a CPU (46 of FIG. 1). Furthermore, all the limitations disclosed by these claims can be found in a common CDMA terminal.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify 3GPP331 to include a buffer for storing process parameters and a control means for controlling buffer for reading out and storing a pertinent process parameter with respect to the process parameter buffer based on general knowledge in the art.

As to **claim 4** and **5**, 3GPP331 discloses the data communication terminal device according to claim 2 and 3, respectively, wherein the parameter update record flag (*TFCI combining indicator*, 6th line from bottom, Page 140);

3GPP331 is **silent on** the flag indicating preference rank of TFCI and using the history of past use of TFCI.

Forrester teaches historic information of storing parameters for later usage (lines 6-7 of [051]). One skilled in the art would have been motivated to combine 3GPP331 with Forrester to rank the key parameters and save historic information of the key parameters for future usage and have a flag to indicate whether such information is available or not to save computing time and power.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine 3GPP331 with Forrester to rank the key parameters and save historic information of the key parameters for future usage and have a flag to indicate whether such information is available or not to save computing time and power.

As to **claim 6** and **7**, 3GPP331 discloses the data communication terminal device according to claim 2 and 3.

3GPP331 is **silent on** wherein the parameter calculation check unit causes, when it decides that the pertinent process parameter has not yet been calculated, the coding parameter process unit to calculate the process parameter and issues, when the process parameter has been calculated, an instruction to the buffer control means for reading out the process parameter from the process parameter buffer and using the read-out process parameter.

Forrester teaches storing parameters with historic information for the later use (lines 6-7 of [051]) as explained in claim 4 above. One skilled in the art would have been motivated to combine 3GPP331 with Forrester to use the saved key parameters for the benefit of saving computing time and power.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine 3GPP331 with Forrester to use the saved key parameters for the benefit of saving computing time and power.

As to **claim 8**, 3GPP331 discloses the data communication terminal unit according to one of claims 2 and 3.

3GPP331 is **silent on** wherein the buffer control means adds, to the contents in the process parameter buffer, the number of times of use of transport format combination indicator (TFCI) in a pertinent parameter table, with respect to which reading and storing are done, while updating TFCI use history.

Forrester teaches storing parameters with historic information for the later use (lines 6-7 of [051]) as explained in claim 4 or 5 above, and TFCI is a such parameter.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine 3GPP331 with Forrester to save the historic information of TFCI for later use for the benefit of saving computing time and power.

As to **claim 9**, 3GPP331 discloses the data communication terminal unit according to one of claims 2 and 3.

3GPP331 is **silent on** wherein in the reading and storing of the process parameter with respect to the process parameter buffer, the buffer control means uses the area of a non-use parameter table if such non-use parameter table is present.

Forrester teaches storing parameters with historic information for the later use (lines 6-7 of [051]) as explained in claim 4 or 5 above. One skilled on the art would have been motivated to let storage control mechanism (buffer control means) to use the area of a non-use parameter table if such non-use parameter table is present for the benefit of storage efficiency.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine 3GPP331 with Forrester to use the area of a non-use parameter table if such non-use parameter table is present for the benefit of storage efficiency.

As to **claim 10**, 3GPP331 discloses the data communication terminal unit according to one of claims 2 and 3.

3GPP331 is **silent on** wherein the buffer control means is constructed such that when no non-use parameter table is present in the process parameter buffer at the time of storing the process parameter buffer, the buffer control means determines a

parameter table to be a superscription subject according to the result of a weighing process on at least either the use history of a plurality of times of past use of TFCI.

Forrester teaches storing TFCI with historic information for the later use (lines 6-7 of [051]) as explained in claim 4 or 5 above. One skilled on the art would have been motivated to decide to use the parameter or not based according to the result of a weighing process on at least either the use history of a plurality of times of past use for searching an optimal solution.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine 3GPP331 with Forrester to use the parameter or not based according to the result of a weighing process on at least either the use history of a plurality of times of past use for searching an optimal solution.

As to **claim 11**, 3GPP331 and Forrester in combination disclose the data communication terminal device according to one of claims 4 and 5.

3GPP331 and Forrester are **silent on** wherein when no data transport rate restriction can be externally imposed, an upper rank system controls the setting of a pertinent preference rank record flag in the process buffer parameter according to the presence/absence data about discrete control channel (DCCH) and a transport format combination indicator (TFCI) as a combination of the maximum and minimum data quantity discrete traffic channels (DTCH).

However, one skilled on the art would have been motivated to decide whether to assign parameters with a preference rank record flag according to the

presence/absence data about DCCH and TFCI for the purpose of selecting the best parameter.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to assign parameters with Forrester to according to the presence/absence data about DCCH and TFCI for the benefit of selecting the best parameter.

As to **claim 12**, 3GPP331 and Forrester in combination disclose the data communication terminal device according to one of claims 4 and 5.

3GPP331 and Forrester are **silent on** wherein no data transport rate restriction can be externally imposed, an upper rank system controls the setting of a pertinent preference rank record flag in the process parameter buffer according to the presence/absence data about discrete control channel (DCCH) and a transport format combination indicator (TFCI) as a combination of the maximum and minimum data quantity ones of the discrete traffic channel (DTCH) transport formats within the transport rate restriction.

However, one skilled on the art would have been motivated to decide whether to assign parameters with a preference rank record flag according to the presence/absence data about DCCH and TFCI for the benefit of selecting the best parameter.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to assign parameters taught by Forrester according to the

presence/absence data about DCCH and TFCI for the benefit of selecting the best parameter.

As to **Claim 18**, 3GPP331 discloses the data communication terminal device according to one of claims 2 and 3.

3GPP331 is **silent on** wherein the process parameter buffer can read out a part of full data possessed by itself at a desired timing into the upper rank controller for storing the read-out data in a pertinent non-volatile memory at a desired timing. .

Forrester teaches storing TFCI with historic information for the later use (lines 6-7 of [051]) as explained in claim 4 or 5 above. One skilled on the art would have been motivated to read saved parameter with a proper timing for the benefit of ensuring device normal operation and saving power.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine 3GPP331 with Forrester to read saved parameter with a proper timing for the benefit of ensuring device normal operation and saving power.

As to **Claim 19**, 3GPP331 and Forrester disclose the data communication terminal device according to one of claim 18.

3GPP331 and Forrester are **silent on** wherein when the same service is utilized at the next time, initial data can be transported from the non-volatile memory to the process parameter buffer.

However, one skilled on the art would have been motivated to load initial data into parameter buffer from non-volatile memory since it is a common practice in the art.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to load initial data into parameter buffer from non-volatile memory due to obvious industry expedient.

As to **Claim 20**, 3GPP331 discloses the data communication terminal device according to one of claims 2 and 3.

3GPP331 is **silent on** wherein a part or full data held in the process parameter buffer are read out into the upper rank controller at a desired timing for storing the read-out data in a predetermined service in the network at a desired timing.

Forrester teaches storing TFCI with historic information for the later use (lines 6-7 of [051]) as explained in claim 4 or 5 above. One skilled on the art would have been motivated to read part of saved parameters that is necessary for device operation with a proper timing for the benefit of efficiency, speed and saving power.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine 3GPP331 with Forrester to read part of saved parameters that is necessary with a proper timing for the benefit of efficiency, speed and saving power.

As to **Claim 21**, 3GPP331 and Forrester disclose the data communication terminal device according to one of claim 20.

3GPP331 and Forrester are **silent on** wherein when utilizing the same service at the next time, initial data can be read-out from the service and transported to the process parameter buffer.

However, one skilled on the art would have been motivated to load initial data into parameter buffer from non-volatile memory since it is a common practice in the art.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to load initial data into parameter buffer from non-volatile memory due to obvious industry expedient.

For **Claim 22**, it is an equivalent method claim of claim 14 because the inventive concept is the same, therefore, is rejected for the reason as explained in claim 14 above.

For **Claim 23**, it is an equivalent method claim of claim 4 because the claimed inventive concept is the same, therefore, is rejected for the reason as explained in claim 4 above.

For **Claim 24**, it is an equivalent method claim of claim 5 because the claimed inventive concept is the same, therefore, is rejected for the reason as explained in claim 5 above.

As to **25**, 3GPP331 and Forrester in combination disclose the data communication terminal device according to one of claims 23 and 24, but are silent on wherein the updating of the parameter data held in the storage function part and the utilization frequency are managed, and the presence/absence data of discrete control channel (DCCH) data and the transport format combination indicator (TFCI) as a combination of the maximum and minimum ones of discrete traffic channel (DTCH) transport formats are preferentially stored in the storage function part, while regarding

the other TFCIs the remainder of the pertinent parameters are selectively stored according to the utilization frequency thereof.

However, updating parameters and storing them for later usage is general knowledge in the art (e.g., taught by Forrester [051]), one skilled in the art would have been motivated to use by utilization frequency is a basic element of CDMA technology that is considered as the general knowledge in the art; and one skilled on the art would have been motivated to update stored parameters decide whether to assign parameters with a preference rank record flag according to the presence/absence data about DCCH and TFCI for the benefit of selecting the best parameter.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to assign parameters taught by Forrester according to the presence/absence data about DCCH and TFCI for the benefit of selecting the best parameter.

As to **Claim 26**, 3GPP331 and Forrester in combination disclose the data communication terminal device according to one of claims 23 and 24, but are silent on wherein the preference rank of the parameter to be applied is updated according to the transport rate control data or the receiving sensitivity data given from the network.

However, ranking parameters according to its importance and applied them in the rate control is well known in the art¹

As to **Claim 27**, it is equivalent method claims of claim 18 because the claimed inventive concept is the same, therefore, is rejected for the reason as explained in claim 18 above.

For **Claim 28**, it is equivalent method claims of claim 8 because the claimed inventive concept is the same, therefore, is rejected for the reason as explained in claim 8 above.

For **Claim 29**, it is the coding function part of claim 28, therefore, is rejected for the reason as explained in claim 28 above.

For **Claim 30**, it is the decoding function part of claim 28, therefore, is rejected for the reason as explained in claim 28 above.

7. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over 3GPP331 in view of Forrester over claims 4-5, further in view of Lee et al., (US 2002/0082020 A1, hereinafter **Lee**).

As to **Claim 13**, GPP331 and Forrester in combination disclose the data communication terminal device according to one of claims 4 and 5,

Lee further discloses wherein process buffer parameter is capable of setting the management of the supply and stop of its own operation power and operation clock for each parameter table and also capable of stopping the supply of the operation power and/or operation clock to the non-use parameter tables (power-down and power-up commands in [0041]).

8. **Claims 14-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over 3GPP331 in view of Lee et al., (US 2002/0082020 A1, hereinafter **Lee**) and Forrester.

As to **Claim 14**, GPP331 discloses the data communication terminal device according to claim 2.

GPP331 is **silent on** wherein the coding parameter calculation unit is constituted by hardware such as electronic circuits, and the supply of its own operation power and/or operation clock is stopped when the process parameters of all transport format combination indicators in the utilized service have been calculated and stored in the process parameter buffer.

Lee teaches power-down or power-up depending on operation conditions (power-down and power-up commands in [0041]). One skilled in the art would have been motivated to combine GPP331 with Lee for the benefit of saving power, which is essential for wireless device.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine GPP331 with Lee for the benefit of saving power.

As to **Claim 15**, GPP331 discloses the data communication terminal device according to claim 3.

Lee teaches power-down or power-up depending on operation conditions (power-down and power-up commands in [0041]). One skilled in the art would have been motivated to combine GPP331 with Forrester for the benefit of saving power, which is essential for wireless device.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine GPP331 with Lee for the benefit of saving power.

As to **Claim 16**, it is rejected for the same reason explained in claim 14 since the device is in idle state when in power-down state.

As to **Claim 17**, it is rejected for the same reason explained in claim 15 since the device is in idle state when in power-down state.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianye Wu whose telephone number is (571)270-1665. The examiner can normally be reached on Monday to Thursday, 8am to 7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571)272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jianye Wu/
Examiner, Art Unit 2616

/Seema S. Rao/
Supervisory Patent Examiner, Art Unit 2616